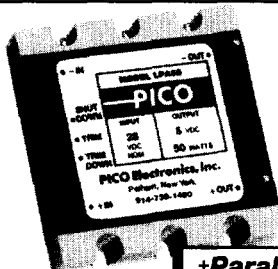


## SERIES LPA

**3.3 to 200 VDC**  
**Outputs Available**  
**Isolated Regulated**  
**75 Watts**  
**DC-DC Converters**  
**Wide Input Range**  
**18-36 V DC**  
**Short Circuit**  
**Protected**  
**Parallel Operation**

The new PICO LPA Series of high power DC-DC Converters allow a wide input voltage of 18 – 36 VDC, while maintaining a regulated output. They are fully safeguarded for over voltage, over temperature and continuous short circuit protection. The availability of Dual Isolated Outputs, small size, and the capability of parallel operations as standard features should reduce your design and component costs, while the fixed frequency operation helps parallel connections for higher power requirements. This high-density unit is assembled in the USA with PICO quality and component selection, allowing it to meet the most stringent commercial requirements.



Patented

**Parallel Operation**

Consult factory to optimize for your application

### FEATURES:

- Dual isolated outputs
- Short circuit protection
- Input voltage protection
- Thermal, over temp. shutdown
- Line regulation
- Load regulation
- No external components required
- Hi density, hi efficiency design
- Remote shutdown
- Trim capabilities
- Fixed frequency-100 Khtz

### TYPICAL CHARACTERISTICS:

**Frequency:** 100 Khtz  
**Base plate:** Max. +85° C  
**Operating Temp.:** See thermal chart, Min. 0° C ambient, Max. + 85° C base plate temp.  
**Test conditions:** 25° C ambient  
**Isolation Base Input:** 2121 VDC  
**Isolation Input output:** 4242 VDC  
**Isolation Output to Base:** 1000 VDC  
**Storage Temp.:** - 55° C to +105° C

**For All Modifications and Custom Models Call Factory**

## SERIES LPA SINGLE - 75 WATTS - INPUT 18-36 VDC

| PICO PART NUMBER | INPUT VOLTAGE RANGE (VDC) | OUTPUT VOLTAGE DC | MAX. OUTPUT POWER * (W) | EFF. @ FULL LOAD TYPICAL ** (%) | MAX LOAD REGULATION (%) ** |         | MAX LINE REGULATION AT FULL LOAD (%) |         | OUTPUT VOLTAGE RIPPLE FULL LOAD 1-1 MHz BW (mV-P) | OUTPUT VOLTAGE TOLERANCE (±%)** | PRICE 1-24 |
|------------------|---------------------------|-------------------|-------------------------|---------------------------------|----------------------------|---------|--------------------------------------|---------|---------------------------------------------------|---------------------------------|------------|
|                  |                           |                   |                         |                                 | 10-50%                     | 50-100% | 18-28 V                              | 28-36 V |                                                   |                                 |            |
| LPA3.3S          | 18-36                     | 3.3               | 30                      | 73                              | 1.5                        | 1.5     | 1.0                                  | 1.0     | 50                                                | 2                               | 129.00     |
| LPA5S            | 18-36                     | 5                 | 50                      | 80                              | 1.25                       | 1.25    | 1.0                                  | 1.0     | 50                                                | 1.5                             | 129.00     |
| LPA5.2S          | 18-36                     | 5.2               | 50                      | 80                              | 1.25                       | 1.25    | 1.0                                  | 1.0     | 50                                                | 1.5                             | 129.00     |
| LPA9S            | 18-36                     | 9                 | 60                      | 84                              | 1.25                       | 1.25    | 1.0                                  | 1.0     | 50                                                | 1                               | 129.00     |
| LPA12S           | 18-36                     | 12                | 60                      | 85                              | 1.25                       | 1.25    | 1.0                                  | 1.0     | 50                                                | 0.75                            | 129.00     |
| LPA15S           | 18-36                     | 15                | 65                      | 85                              | 1.0                        | 1.0     | 0.75                                 | 0.75    | 50                                                | 0.75                            | 129.00     |
| LPA24S           | 18-36                     | 24                | 75                      | 87                              | 0.75                       | 0.75    | 0.5                                  | 0.5     | 50                                                | 0.75                            | 129.00     |
| LPA28S           | 18-36                     | 28                | 75                      | 87                              | 0.5                        | 0.5     | 0.5                                  | 0.5     | 50                                                | 0.5                             | 129.00     |
| LPA48S           | 18-36                     | 48                | 75                      | 85                              | 0.5                        | 0.5     | 0.5                                  | 0.5     | 50                                                | 0.5                             | 129.00     |
| LPA100S          | 18-36                     | 100               | 75                      | 85                              | 0.5                        | 0.5     | 0.5                                  | 0.5     | 100                                               | 0.5                             | 193.50     |

10% Minimum load required at all times

\*Using proper thermal management maximum temp of + 85°C (case)

\*\*Reading taken at nominal 28 VDC input

## SERIES LPA DUAL - 75 WATTS - INPUT 18-36 VDC

| PICO PART NUMBER | INPUT VOLTAGE RANGE (VDC) | OUTPUT VOLTAGE DC | MAX. OUTPUT POWER * (W) | EFF. @ FULL LOAD TYPICAL ** (%) | MAX LOAD REGULATION (%) ** |         | MAX LINE REGULATION AT FULL LOAD (%) |         | OUTPUT VOLTAGE RIPPLE FULL LOAD 1-1 MHz BW (mV-P) | OUTPUT VOLTAGE TOLERANCE (±%)** | PRICE 1-24 |
|------------------|---------------------------|-------------------|-------------------------|---------------------------------|----------------------------|---------|--------------------------------------|---------|---------------------------------------------------|---------------------------------|------------|
|                  |                           |                   |                         |                                 | 10-50%                     | 50-100% | 18-28 V                              | 28-36 V |                                                   |                                 |            |
| LPA5D            | 18-36                     | 5                 | 50                      | 80                              | 1.25                       | 1.25    | 1                                    | 1       | 50                                                | 1.5                             | 174.00     |
| LPA9D            | 18-36                     | 9                 | 60                      | 84                              | 1.25                       | 1.25    | 1                                    | 1       | 50                                                | 1                               | 174.00     |
| LPA12D           | 18-36                     | 12                | 60                      | 85                              | 1.25                       | 1.25    | 1                                    | 1       | 50                                                | 0.75                            | 174.00     |
| LPA15D           | 18-36                     | 15                | 65                      | 85                              | 1                          | 1       | 0.75                                 | 0.75    | 50                                                | 0.75                            | 174.00     |
| LPA24D           | 18-36                     | 24                | 75                      | 87                              | 0.75                       | 0.75    | 0.5                                  | 0.5     | 50                                                | 0.5                             | 174.00     |
| LPA28D           | 18-36                     | 28                | 75                      | 87                              | 0.5                        | 0.5     | 0.5                                  | 0.5     | 50                                                | 0.5                             | 174.00     |
| LPA48D           | 18-36                     | 48                | 75                      | 85                              | 0.5                        | 0.5     | 0.5                                  | 0.5     | 50                                                | 0.5                             | 174.00     |

10% Minimum load required at all times

\*Using proper thermal management maximum temp of + 85°C (case)

\*\*Reading taken at nominal 28 VDC input

## Parallel Operation HIGH VOLTAGE SERIES LPA TO 200 VDC - 50 WATTS - INPUT 18-36 VDC

| PICO PART NUMBER | INPUT VOLTAGE (V DC) | OUTPUT VOLTAGE V DC | MAX. OUTPUT POWER (W)* | EFF. @ FULL LOAD TYPICAL (%)** | MAX LOAD REGULATION (%) ** |         | MAX LINE REGULATION AT FULL LOAD (%) |          | OUTPUT VOLTAGE RIPPLE 1-1 MHz BW (%) | OUTPUT VOLTAGE TOLERANCE (±%)** | PRICE  |
|------------------|----------------------|---------------------|------------------------|--------------------------------|----------------------------|---------|--------------------------------------|----------|--------------------------------------|---------------------------------|--------|
|                  |                      |                     |                        |                                | 20-50%                     | 50-100% | 18-28 VDC                            | 28-36VDC |                                      |                                 |        |
| LPA125S          | 18-36                | 125                 | 50                     | 82                             | 0.5                        | 0.5     | 0.3                                  | 0.3      | 1                                    | 0.5                             | 193.50 |
| LPA150S          | 18-36                | 150                 | 50                     | 82                             | 0.5                        | 0.5     | 0.3                                  | 0.3      | 1                                    | 0.5                             | 193.50 |
| LPA175S          | 18-36                | 175                 | 50                     | 82                             | 0.5                        | 0.5     | 0.3                                  | 0.3      | 1                                    | 0.5                             | 193.50 |
| LPA200S          | 18-36                | 200                 | 50                     | 82                             | 0.5                        | 0.5     | 0.3                                  | 0.3      | 1                                    | 0.5                             | 258.00 |

10% Minimum load required at all times

\*Using proper thermal management maximum temp of + 85°C (case)

\*\*Reading taken at nominal 28 VDC input

† UL recognition pending

**Dual Isolated Outputs**  
**Special Voltage**  
**Combinations Available**

**Hi Density**  
**to 75 Watts**

**Up to 200 VDC**  
**Output Models**

**21 Standard Models**

Application Notes  
 page 138  
 Mechanical Configuration  
 page 140

Full thermal analysis can be determined using application notes on page 138. By using the efficiency and thermal resistance of your desired unit to the formula you can complete your evaluation. The curves below were generated for Part #LPA24S using Application Notes. Please consult factory with any questions.

